

What Is Claimed Is:

1. A porcine uroplakin II gene promoter having a base sequence of SEQ ID NO: 1:

5 [SEQ ID NO: 1]

gggctaggagtgaatcagagctggcctatgccacagcaacgcagaatccaaaccacatctccgacctaca
 ccagaccgtcaccataacacaggatccttaaccactgagcaaggcaggatcaaaccctcatggatactagt
 cgggttcttaaccgctgagccacagtgggcactcctgttttgtgtcttctgttttggctgcatctgcagcatacagaa
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 10 agaccaccagggaacgccccctcaactttcatgccttggaaccctgagtcagtacaacctgacaatngntttttttttt
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 10 cgcttagtcacccctgcccctctgcagctgcctgagccaccaagaccagccaaggtctcctgcttctggcctgagggc
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 cccaaggggcaggtgaacaggattccctctggcccctctacccccaggacaaaaccagagccccaggacagggc
 ctcaactgcctcaggaaaccacagcttgccagcaccagcccagcaccagcccagct

15 2. The uroplakin II promoter of Claim 1, which is one selected from
 functional equivalents which have one or more disruption, deletion, insertion, point,
 substitution, nonsense, misense, polymorphism or rearrangement mutation occurred
 in the base sequence of SEQ ID NO: 1.

20 3. An expression vector comprising the base sequence of the promoter of
 Claim 1 or 2 and a base sequence coding for a target protein at the 3' end of the
 promoter.

25 4. The expression vector of Claim 3, wherein the target protein is human
 erythropoietin (EPO).

5. The expression vector of Claim 4, which is the expression vector pUP2/hEPO deposited under the accession number KCTC 10352BP.

6. The expression vector of Claim 4, which is an I/pUP2/hEPO vector containing a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, and an insulator of SEQ ID NO: 6 at the 5' end of the UPII promoter:

[SEQ ID NO: 5]

gcggccgcgcgcgtcaggtggcacttttcggggaaatgtgcgcggaaccctatttgttattttctaataca
ttcaaatatgtatccgctcatgagacaataaccctgataaatgctcaataatattgaaaaaggaagagtcctgaggcggaa
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5 ggcaggccctgccatagcctcaggttactatatactttagattgattfaaaacttcattttaattfaaaaggatctaggtga
agatccttttgataatctcatgacaaaaatccctaacgtgagtttcgtccactgagcgtccgatcg

[SEQ ID NO: 6]

tcgactctagaggacagcccccccaaagccccagggtgtaattacgtccctccccgctaggggca
gcagcgagccgcccggggctccgctccggtccggcgtcccccgcatcccgagccggcagcgtcgggggacag
10 cccgggcacggggaaggtggcacgggatcgcttctctgaacgcttctcgtgctctttgagcctgcagacacctgggg
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 10 gctgtgccactgcagcaccgctcttggagaaggtaaattctgctaaatccagcccaccctcccctggcacaacgtaag
 gccattatctctcatccaactccaggaacggagtcagttag

7. The expression vector of Claim 4, which is a pUP2/hEPO (WPRES) vector
 containing a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, and a
 15 woodchuck hepatitis virus posttranscriptional regulatory element (WPRES) of SEQ ID
 NO: 7 at the 3' end of the EPO gene:

[SEQ ID NO: 7]

accaggtctgttctgttaatacaacctctggattacaaaattgtgaaagattgactggtattcttaactatgttgct
 cttttacgctatgtggatacgtgtttaatgcctttgtatcatgctattgcttcccgatggcttcatcttctccttgtataa
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 25 agtcgatctcccttgggccgctccccgcctgttctgcctcgggctcctcag

8. The expression vector of Claim 4, which is an I/pUP2/hEPO (WPRE) vector that contains a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, an insulator of SEQ ID NO: 6 at the 5' end of the UP2 promoter, and an
5 WPRE of SEQ ID NO: 7 at the 3'-end of the EPO gene.

9. An animal's fertilized ovum introduced with the expression vector of any one of Claims 4 to 8.

10 10. A transgenic animal obtained by the implantation of the fertilized ovum of Claim 9.

11. The transgenic animal of Claim 10, which is one selected from the group consisting of porcine, mouse, bovine, poultry, ovine and caprine animals.
15

12. A method for producing useful proteins, which comprises the steps of:
implanting the animal's fertilized ovum introduced with the expression vector of any one of Claims 4 to 8 into a surrogate mother animal; and
obtaining transgenic animals from the surrogate mother animal; and
20 isolating and purifying useful proteins from the urine of the transgenic animals.